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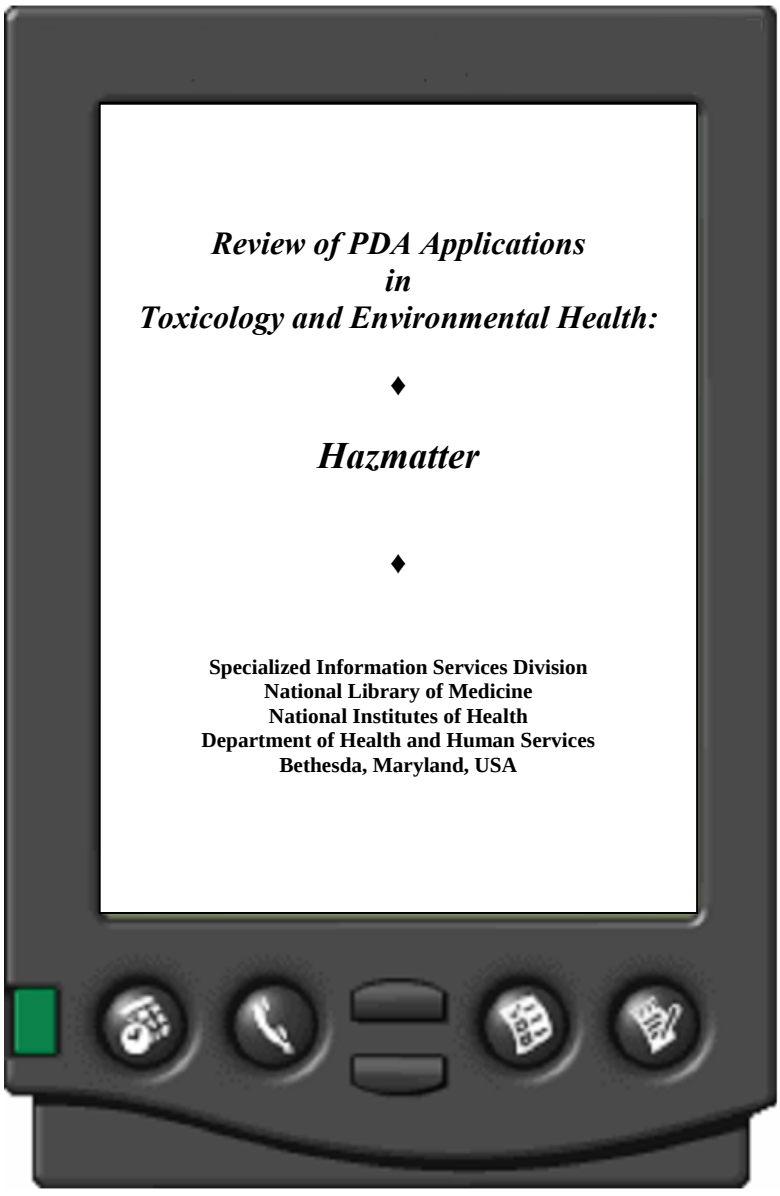

Review of PDA Applications in Toxicology and Environmental Health:

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Hazmatter

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Specialized Information Services Division
National Library of Medicine
National Institutes of Health
Department of Health and Human Services
Bethesda, Maryland, USA

Hazmatter

(Reviewed 05/2003)

General Information

For general comments regarding the *Review of PDA Applications in Toxicology and Environmental Health*, please see the ***Overview***. Here we review the main technical and content features of the Palm OS version of *Hazmatter (3.0)* based upon a free, downloadable demo. *Hazmatter* "contains the most vital information from the *2000 Emergency Response Guidebook* (ERG2000) for hazardous materials situations" and was developed by John Covele of Pocket Mobility, Inc. This database application is searchable by name, ID number, or Guide number. It contains over 3000 hazardous materials, with 61 Guides describing dangers, precautions, safety measures, health hazards, and more. *Hazmatter* is a custom-built application, which requires 825 KB of available memory space, and will run from a memory card.

Intended Users

- First Responders
- Rescue Personnel
- Paramedics
- Firefighters
- Law Enforcement Personnel

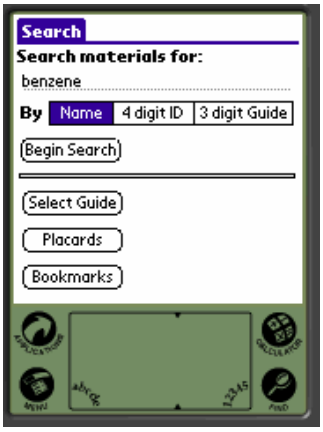
Authorship/Data Source

Hazmatter was authored by John Covele of Pocket Mobility, Inc. and is published by Jones and Bartlett Publishers. The hazardous materials data contained in this database application were derived from the *2000 Emergency Response Guidebook* (ERG2000), which was developed jointly by the U.S. Department of Transportation, Transport Canada, and the Secretariat of Communications and Transportation of Mexico (SCT). The ERG is updated every three to four years to accommodate new products and technology.

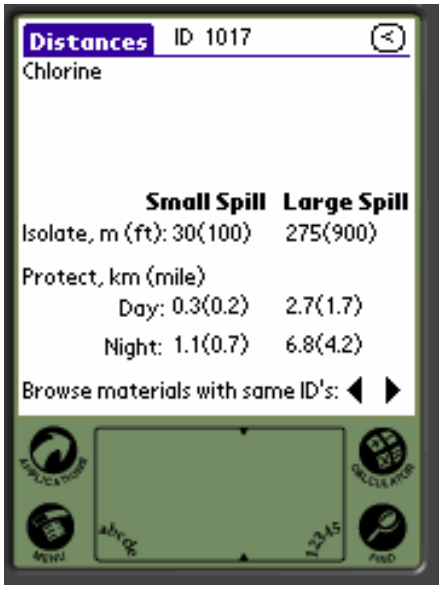
Contents

Hazmatter is intended for first responders to hazardous material incidents and covers the following topics: fire/explosion, health concerns, public safety issues, protective clothing and gear, site evacuation and isolation guidelines, emergency response, spill or leak specifics, and first aid guidelines. The *2000 Emergency Response Guidebook* (ERG2000), on which the application's contents are based, is primarily a guide to aid emergency personnel in 1) quickly identifying the material(s) involved in a HazMat incident and 2) protecting themselves and the public during the initial response phase.

As illustrated in the screen shots below, the database is searchable by Name, by 4-digit ID number, or by 3-digit Guide number.

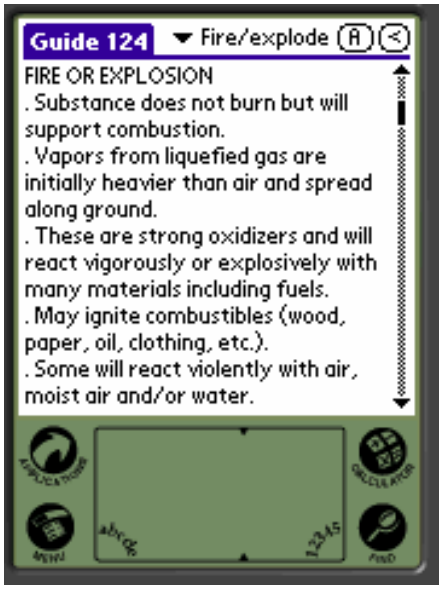


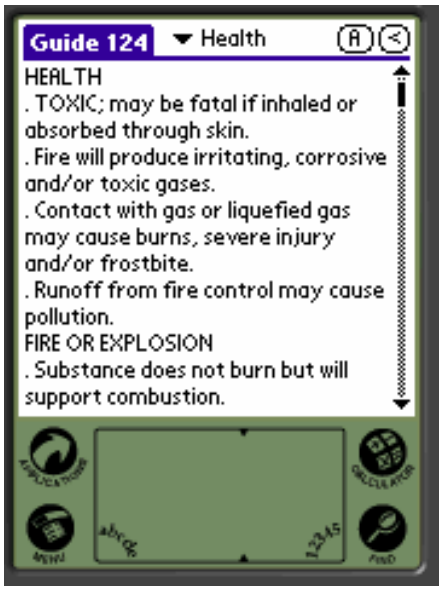
As an example, searching the database by Name for the substance **chlorine** (left screen shot below) will generate the screen display to the right. This screen always shows the material's 4-digit ID number in the top center portion. It also provides access to the applicable Guidebook sections (center of screen). For illustrative purposes, the screen shots that follow will display, in larger format, the contents of the Guidebook sections for the same substance (chlorine).



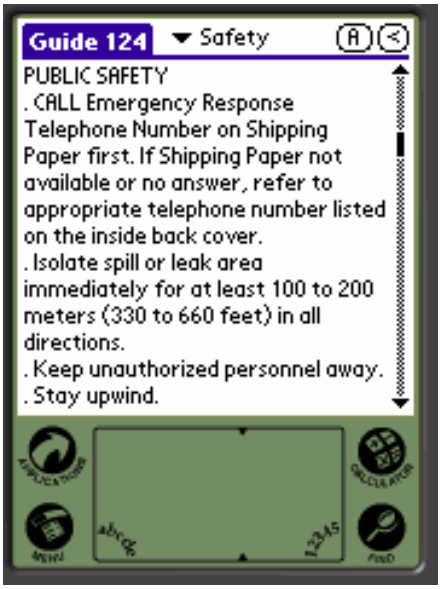
◄ ***The contents of the Distances (Green Section) portion of the Guidebook, applicable to chlorine spills, are displayed in the screen shot to the left. Both small spill and large spill data (in metric and U.S. units) are provided.***

► ***The screen shot to the right shows the fire/explosion data pertinent to chlorine, listed under the Fire/Explode menu item in Guide 124.***



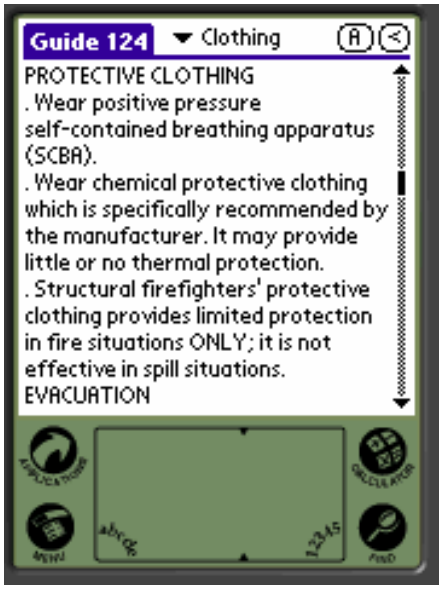


◄ ***Various health concerns related to exposures to chlorine are listed under the Health menu item in Guide 124, as shown in the screen shot to the left.***

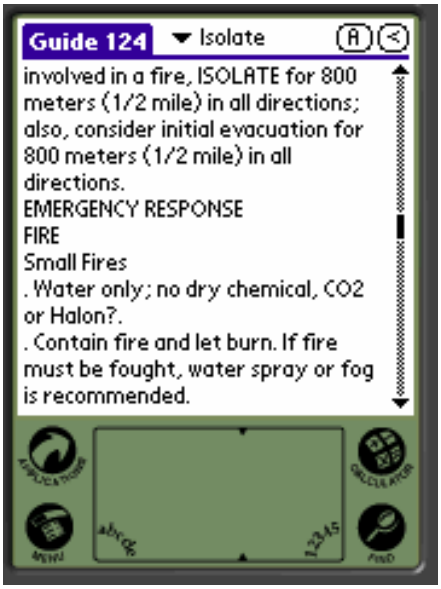


◄ ***Public safety issues related to chlorine spills are listed under the Safety menu item in Guide 124, as shown in the screen shot to the left.***

► ***The screen shot to the right displays the protective clothing information for dealing with chlorine, listed under the Clothing menu item in Guide 124.***

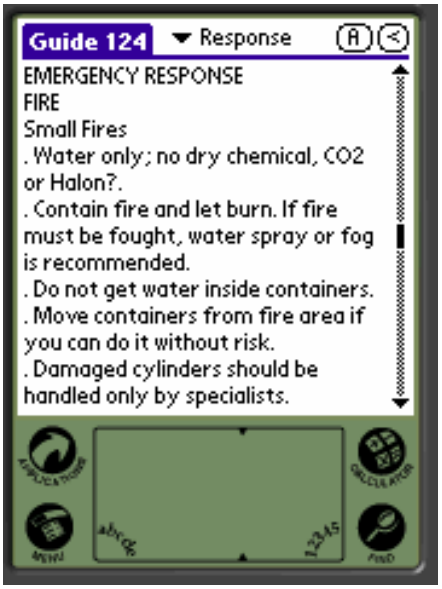


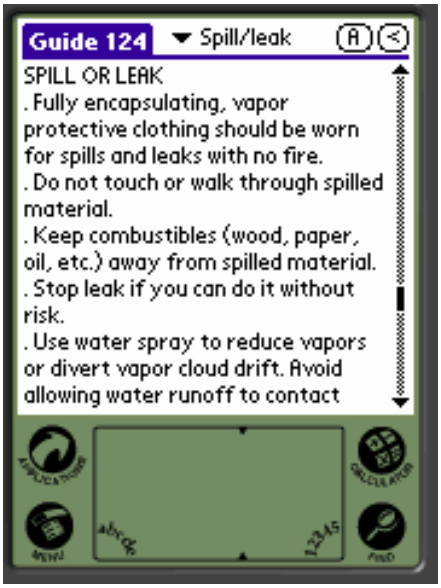
◄ ***Emergency evacuation guidelines related to chlorine spills and fires are provided under the Evacuation menu item in Guide 124, as shown in the screen shot to the left.***



◄ ***Closely associated with the Evacuation guidelines are the Isolation guidelines, which are shown for fires involving chlorine under the Isolate menu item in Guide 124 (screen shot to the left).***

► ***The screen shot to the right shows the appropriate emergency response actions to take with fires resulting from chlorine spills or leaks, listed under the Response menu item in Guide 124.***





◄ ***Specific guidelines for dealing with chlorine spills or leaks are listed under the Spill/Leak menu item in Guide 124, as shown in the screen shot to the left.***

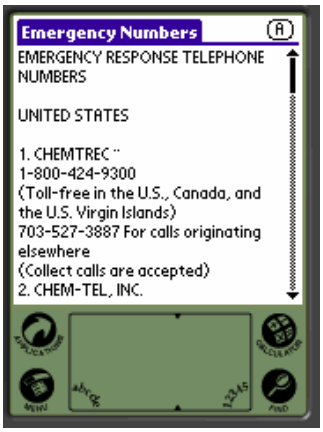
◄ ***First aid instructions for chlorine exposure victims are provided under the First Aid menu item in Guide 124, as shown in the screen shot to the left.***

Hazmatter also contains a Placards section, which displays the various placards used in designating hazardous materials. The screen shots below illustrate a few of them.

For each set of placards, *Hazmatter* also provides the appropriate Guide information:

Another feature of *Hazmatter* is that it provides access to information contained in the NFPA 704 document (Standard System for the Identification of the Hazards of Materials for Emergency Response). This document, which is published by the National Fire Protection Association (NFPA), is "concerned with the health, fire, reactivity and other related hazards created by short-term exposure as might be encountered under fire or related emergency conditions." The two screen shots below provide an example of this particular content feature.

Three final content features of the *Hazmatter* application are shown in the screen shots that follow. From left to right, they are the Emergency Numbers, the Hazard Classes, and the IC Checklist sections. The first section provides emergency response telephone numbers for the U.S., Canada, Mexico, and Brazil; the second section presents the various classes of hazardous materials included in the Hazard Classification System; and the third section displays an action checklist to be followed by an incident commander (IC) at the scene of an accident.

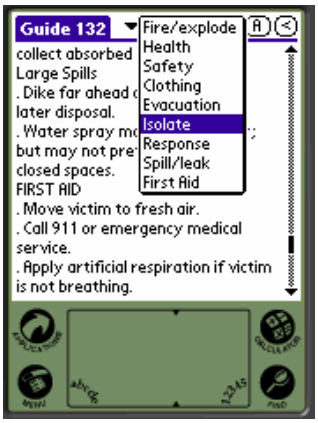


Navigation

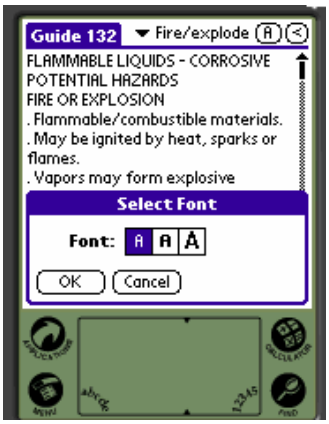
A user may search the database by performing the following steps: selecting one of three search options (by Name, by 4-digit ID number, or by 3-digit Guide number), entering a term or number on the dotted line, and tapping on Begin Search. For instance, by choosing the 3-digit Guide option and performing a search on the number 132 (left screen below), the user is taken to the first substance (Acetic acid, glacial) to which the information in Guide 132 is applicable (center screen below). By then tapping on Guide 132 (Orange Section), the user can access the information in Guide 132 (right screen below).

Going back to the center screen below, tapping on Distances (Green Section) will display any information available on safe distances at a HazMat incident site. Tapping on ◀ or ▶ will display the previous or next data record, respectively, from the general list of 3000+ hazardous materials contained in the database. On the other hand, tapping on ?< or >? will display the previous or next data record, respectively, but only from the specific list of materials covered by Guide 132. Tapping on New Search will return the user to the search screen.

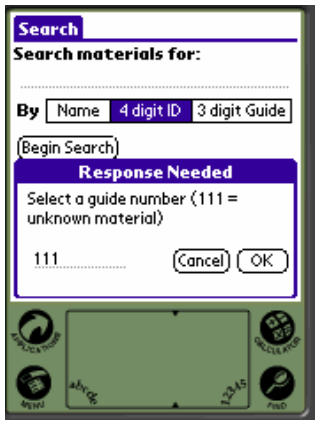
Tapping on ▼ (right screen shot above) allows the user to select from different topics in a pop-up menu (screen shot below).



Tapping on Ⓐ (screen shot below) will allow the user to select one of three fonts in which to display text. Tapping on ⓧ will return the user to the previous screen.

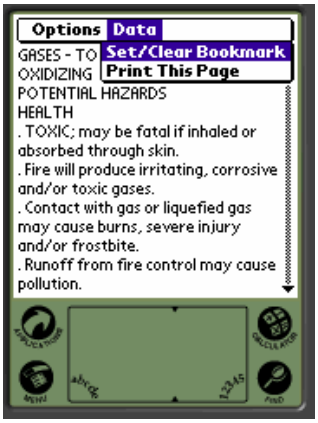


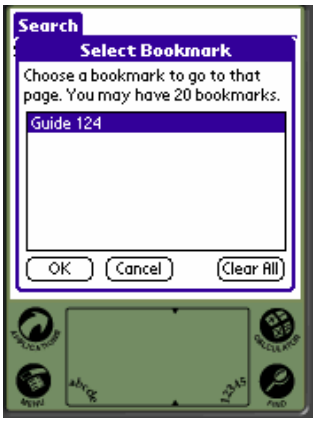
Returning to the search screen (left screen below), tapping on Select Guide in that screen allows the user to search on a specific Guide number (right screen below).



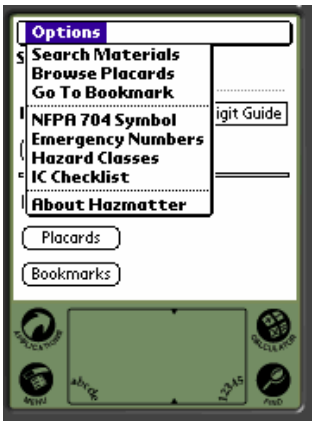
Tapping on Placards in the search screen allows the user to browse (ⓧ ⓨ) images of placards (screen shot below). Tapping on Guide displays the related Guide information.

Tapping on the Set/Clear Bookmark option under the Data heading permits the user to add or remove bookmarks (left screen below). Tapping on Bookmarks in the main search screen allows the user to access any bookmarked page (right screen below).





Tapping on Search in the top left-hand corner of the search screen allows the user to access several items from a pop-up menu (screen shot below):



For instance, the user can obtain NFPA 704 data by selecting specific values (screen shot below). Tapping on ▸ displays data from the Red, Blue, and Yellow Guidebook sections.

Requirements

- Palm OS 3.0
- 825 KB of RAM

Application Type/Price

- Commercial
- $24.95

Availability

Hazmatter is available from Pocket Mobility, Inc., from Jones and Bartlett Publishers, and from commercial PDA software distributors.

Useful Web Links

For information on Pocket Mobility, Inc., go to www.pocketmobility.com. For information on Jones and Bartlett Publishers, visit www.jbpub.com. For information on the *2000 Emergency Response Guidebook* (ERG2000), see http://hazmat.dot.gov/gydebook.htm. For information on the National Fire Protection Association (NFPA), visit www.nfpa.org.

Review of PDA Applications in Toxicology and Environmental Health

Overview

Handheld computer devices known as Personal Digital Assistants (PDAs) are increasingly being used in the fields of toxicology and environmental health. Moreover, software applications covering specialized subject matter in these fields are increasingly being made available to PDA users.

In an effort to provide information on the main technical and content features of selected applications, the National Library of Medicine's Division of Specialized Information Services (SIS) has undertaken an ongoing review of them. Typically, individual reports in the review series are based on free, downloadable demos.

Each report typically covers the following topics: General Information, Intended Users, Authorship/Data Source, Contents, Navigation, Requirements, Application Type/Price, Availability, Useful Web Links, and Updates.

Note: The *Review of PDA Applications in Toxicology and Environmental Health* is not intended to be all comprehensive, but rather a review of selected applications. SIS staff welcomes any comments on completed reviews or suggestions for additional reviews of applications not currently included, as long as they fall within the scope of toxicology and environmental health. You may contact us via email at tehip@teh.nlm.nih.gov with any comments, questions, or suggestions.

It is not the intention of SIS staff to recommend, or not recommend, any particular PDA device(s) or software application(s), but rather to provide an objective and descriptive review of the main technical and content features of selected applications based on their downloadable demo versions.

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